

Key

OPINIONS AND DECLARATIONS RENDERED BY THE INTER- NATIONAL COMMISSION ON ZOOLOGICAL NOMENCLATURE

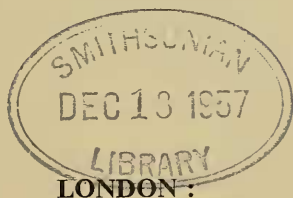
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FRANCIS HEMMING, C.M.G., C.B.E.
Secretary to the Commission

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OPINION 489

Validation under the Plenary Powers of the generic name
Turbinella Lamarck, 1799 (Class Gastropoda), as the
name for the Sacred Chank Shell of India



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INTERNATIONAL COMMISSION ON ZOOLOGICAL NOMENCLATURE

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OPINION 489

VALIDATION UNDER THE PLENARY POWERS OF THE GENERIC NAME "TURBINELLA" LAMARCK, 1799 (CLASS GASTROPODA), AS THE NAME FOR THE SACRED CHANK SHELL OF INDIA

RULING :—(1) Under the Plenary Powers the generic name *Xancus* [Röding], 1798, is hereby suppressed for the purposes of the Law of Priority but not for those of the Law of Homonymy.

(2) The under-mentioned generic name is hereby placed on the *Official List of Generic Names in Zoology* with the Name Number 1228 :—

Turbinella Lamarck, 1799, as validated under the Plenary Powers in (1) above (gender : feminine) (type species, by monotypy : *Voluta pyrum* Linnaeus, 1767) ;

(3) The under-mentioned specific name is hereby placed on the *Official List of Specific Names in Zoology* with the Name Number 1434 :—

pyrum Linnaeus, 1767, as published in the combination *Voluta pyrum* (specific name of type species of *Turbinella* Lamarck, 1799).

(4) The under-mentioned generic names are hereby placed on the *Official Index of Rejected and Invalid Generic Names in Zoology* with the Name Numbers severally specified below :—

- (a) *Turbinella* Bory de St. Vincent, [1827] (a junior homonym of *Turbinella* Lamarck, 1799) (Name No. 1053) ;
- (b) *Turbinellum* Webb, 1948 (an Erroneous Subsequent Spelling for *Turbinella* Lamarck, 1799) (Name No. 1054) ;
- (c) *Turbinellus* Lamarck, 1801 (an Invalid Emendation of *Turbinella* Lamarck, 1799) (Name No. 1055) ;
- (d) *Turbonella* Webb, 1948 (an Erroneous Subsequent Spelling for *Turbinella* Lamarck, 1799) (Name No. 1056) ;
- (e) *Xancus* [Röding], 1798, as suppressed under the Plenary Powers in (1) above (Name No. 1057).

(5) The under-mentioned family-group name is hereby placed on the *Official List of Family-Group Names in Zoology* with the Name Number 195 :—

TURBINELLIDAE Swainson, 1840 (type genus : *Turbinella* Lamarck, 1799).

(6) The under-mentioned family-group name is hereby placed on the *Official Index of Rejected and Invalid Family-Group Names in Zoology* with the Name Number 229 :—

XANCIDAE Woodring, 1928 (type genus : *Xancus* [Röding], 1798) (invalid (a) under *Declaration 20*

because name of type genus suppressed under the Plenary Powers (in (1) above), and (b) because it is a junior objective synonym of TURBINELLIDAE Swainson, 1840).

I. THE STATEMENT OF THE CASE

In the course of correspondence regarding the decision given in *Opinion* 96 that the anonymous catalogue published in 1798 under the title *Museum Boltenianum* satisfied the requirements of the *Règles* Dr. Joshua L. Baily, Jr. (*San Diego, California, U.S.A.*) in a letter dated 14th May 1947 raised with the Office of the Commission the question of the possible use of the Plenary Powers for the purpose of validating, as the name for the Sacred Chank Shell of India, the generic name *Turbinella* Lamarck, 1799, a name which had been invalidated as a junior objective synonym of *Xancus* [Röding], 1798, as the result of the decision taken in the foregoing *Opinion*. After further correspondence with the Secretary, Dr. Baily on 21st November 1955 submitted to the International Commission the following formal application for the validation of the generic name *Turbinella* Lamarck :—

**Proposed use of the Plenary Powers to preserve the generic name
“*Turbinella*” Lamarck, 1799, as the name for the Sacred Chank
Shell of India**

By JOSHUA L. BAILY, Jr.

(*San Diego, California, U.S.A.*)

The object of the present application is to ask the International Commission on Zoological Nomenclature to use its Plenary Powers to preserve the well-known name *Turbinella* Lamarck, 1799 (*Mém. Soc. Hist. nat. Paris* 1799 : 73) as the name for the Sacred Chank Shell of India.

2. The name *Turbinella* Lamarck, of which the Chank Shell *Voluta pyrum* Linnaeus, 1767 (*Syst. Nat.* (ed. 12) 1(2) : 1195) is type species by monotypy, was in uninterrupted use for well over one hundred years. It only became invalidated in 1926 as the accidental byproduct of the publication in that year of the Commission's *Opinion* 96, recognising as being available for nomenclatorial purposes the catalogue entitled *Museum Boltenianum* anonymously published in 1798. This unfortunate work, the acceptance of which by the Commission caused much widespread confusion and name-changing, contained the generic name *Xancus* [Röding], 1798 (*Mus. bolten.* 2 : 134). The genus *Xancus* so established contained a number of species from which in 1906 (*J. Conch.* 11 : 296) Dall, in anticipation of the recognition of the availability of the *Museum Boltenianum*, had selected *Voluta pyrum* Linnaeus to be the type species of this genus. Thus, as matters now stand, the historic name *Turbinella* Lamarck is a junior objective synonym of *Xancus* [Röding].

3. The names in the *Museum Boltenianum* were devised by Bolten but the "indications" which provide those names with the status of availability were supplied by Röding, to whom therefore these names should be attributed (see Hemming, 1955, *Bull. zool. Nomencl.* 11 : 56—57). In coining the name *Xancus*, Bolten no doubt deliberately Latinised the vernacular name "Chank" habitually applied to this species, by adding the termination "-us" and using a different initial letter. In this case the "x" is not the Latin letter which has the sound "ks" but the Greek letter Chi which has the same form and on being transliterated into Latin is normally written as "ch". Bolten's idea was quite ingenious but etymologically the name so formed is objectionable because it comes from roots of several languages, the name itself being of Cingalese origin, while the prefix is Greek and the suffix Latin.

4. The fact that purists will find the name objectionable is however the least important of the reasons for asking for it to be suppressed. The Chank Shell is found in the Eastern seas in the area where the Indian and Pacific Oceans come together. In this area there are important Chank Fisheries which are of direct interest to at least three Sovereign States. Each of these States has its own ordinances and regulations for governing these fisheries, and it is Lamarck's name *Turbinella* which is used in all of these.

5. In addition to the legal and commercial documents in which the name *Turbinella* habitually appears but in which the name *Xancus* is never found, there is a great mass of archaeological and ethnological literature relating to the religious and other uses of the Chank Shell. In Hindoo mythology the God Vishnu underwent several incarnations and in one of these he assumed the form of a Chank Shell in order

that he might go under the waters of the ocean to recover the Vedas which had been stolen and hidden under the sea. In all the literature dealing with this group of subjects it is the name *Turbinella* which is used as the name for the Chank Shell and not the name *Xancus*. The Chank Shell is also of importance in Hindoo religion and medicine owing to the practice of the Hindoo priesthood in administering medicine from reversed (sinistral) specimens of the Chank Shell. These sinistral Chank Shells are considered too sacred for any other use and have in consequence entered widely into Hindoo folk lore. In this literature also it is the name *Turbinella* which has always been used for the Chank Shell.

6. The present is therefore pre-eminently one of those cases where long-established nomenclature ought not to be overturned in compliance with narrow technical requirements of a nomenclatorial kind. Such changes in names are open to strong objection, even when viewed from a strictly zoological angle, but these objections become insuperable when in addition to the disappearance of some well-known zoological name (such as *Turbinella*), such changes lead to serious confusion in fields far removed from actual zoology. Indeed, it is such changes, when permitted in the past, which have done so much to discredit zoological nomenclature and zoologists generally.

7. For the reasons set forth above I accordingly ask that the Commission should validate the name *Turbinella* Lamarck by suppressing its senior objective synonym *Xancus* [Röding], 1798. Even if these cogent reasons had not been present, I should still have considered necessary the action now recommended, for the name *Turbinella* was taken as the base for a family-name TURBINELLIDAE (Swainson, 1840, *Treatise Malac.* (Lardner's *Cab. Cyclop.*) : 75) well over a hundred years ago. I consider it important that this name should not be replaced by the virtually unknown name XANCIDAE Johnson, 1934 (*Proc. Boston Soc. nat. Hist.* 40(1) : 128).

8. The following are the proposals which are therefore now submitted to the International Commission on Zoological Nomenclature, namely that it should :—

- (1) use its Plenary Powers to suppress the generic name *Xancus* [Röding], 1798, for the purposes of the Law of Priority but not for those of the Law of Homonymy ;
- (2) place the under-mentioned name on the *Official List of Generic Names in Zoology* : *Turbinella* Lamarck, 1799 (gender : feminine) (type species, by monotypy : *Voluta pyrum* Linnaeus, 1767) ;

- (3) place the under-mentioned name on the *Official List of Specific Names in Zoology* : *pyrum* Linnaeus, 1767, as published in the combination *Voluta pyrum* (specific name of type species of *Turbinella* Lamarck, 1799) ;
- (4) place the under-mentioned name on the *Official Index of Rejected and Invalid Generic Names in Zoology* : *Xancus* [Röding], 1798, as suppressed under the Plenary Powers under (1) above ;
- (5) place the under-mentioned name on the *Official List of Family-Group Names in Zoology* : TURBINELLIDAE Swainson, 1840 (type genus : *Turbinella* Lamarck, 1799) ;
- (6) place the under-mentioned name on the *Official Index of Rejected and Invalid Family-Group Names in Zoology* : XANCIDAE Johnson, 1934 (type genus : *Xancus* [Röding], 1798).

II. THE SUBSEQUENT HISTORY OF THE CASE

2. Registration of the present application : Upon the receipt in 1947 of the preliminary communication from Dr. Joshua L. Baily, Jr., the question of the validation of the generic name *Turbinella* Lamarck, 1799, as the name for the Sacred Chank Shell of India was allotted the Registered Number Z.N.(S.) 383.

3. Publication of the present application : The present application was sent to the printer on 30th November 1955 and was published on 9th May 1956 in Part 11 of Volume 11 of the *Bulletin of Zoological Nomenclature* (Baily, 1956, *Bull. zool. Nomencl.* **11** : 330—332).

4. Issue of Public Notices : Under the revised procedure prescribed by the Thirteenth International Congress of Zoology, Paris, 1948 (1950, *Bull. zool. Nomencl.* **4** : 51—56), Public Notice of the possible use by the International Commission on Zoological Nomenclature of its Plenary Powers in the present case was given on 9th May 1956 (a) in Part 11 of Volume 11 of the *Bulletin of Zoological Nomenclature* (the Part in which Dr. Baily's application

was published) and (b) to the other prescribed serial publications. In addition, such Notice was given to four general zoological serial publications and to two specialist serials.

5. Comments Received : Two classes of consideration were involved in the present case, namely (a) those affecting taxonomic practice and (b) those affecting anthropologists, social historians and prehistorians. Under the first of these heads eight communications signed by eleven specialists were received during the Prescribed Six-Month Waiting Period following the publication of the present application in the *Bulletin of Zoological Nomenclature* and prior to the submission to the Commission of a Voting Paper relating to this case. The authors of one half of these communications (four specialists) supported the present application, while those of the other half (seven specialists) were opposed to the action recommended by the applicant. After the close of the Prescribed Six-Month Waiting Period and the submission of a Voting Paper to the Commission, one further communication was received. This was from a specialist who was opposed to the action recommended in this case. Under the second of the heads indicated above, a communication was received from one Institution. The body concerned supported the application submitted by Dr. Baily in the present case. The communications so received are reproduced in the immediately following paragraphs.

6. Support on taxonomic grounds received from Carl L. Hubbs (University of California, La Jolla, California, U.S.A.) : On 10th August 1956 Professor Carl L. Hubbs (*University of California, La Jolla, California, U.S.A.*) addressed the following letter to the Office of the Commission in support of the present case on taxonomic grounds (Hubbs, 1956, *Bull. zool. Nomencl.* **12** : 251):—

I hereby express approval of Dr. Joshua L. Baily Jr.'s proposal for the preservation of the long established generic name *Turbinella* and family name TURBINELLIDAE, and for the suppression of the names *Xancus* and XANCIDAE. This proposal seems well substantiated and is quite in line with the spirit and letter of the Copenhagen Colloquium.

7. Support on taxonomic grounds received from Albert L. Baily, Jr. (Westchester, Pennsylvania, U.S.A.) : On 10th September 1956 Dr. Albert L. Baily, Jr. (*Westchester, Pennsylvania, U.S.A.*)

addressed the following letter to the Office of the Commission in support of the present case on taxonomic grounds :—

You have before you an application (Z.N.(S.) 383) asking for the suppression of the name *Xancus* and the validation of the name *Turbinella*.

I am not a conchologist but a botanist, but I believe that the name *Turbinella* should be retained for the convenience of the non-specialist. This generic name is used in a variety of fields other than Zoology and it is well established there. While *Xancus* may have been applied slightly earlier than *Turbinella*, it has never been in general use and *Turbinella* has been in use practically everywhere for many years. It would seem to me to be unjust to expect the wider fields of medicine, literature, etc., to change from such a well established name, and such an obviously appropriate one, as *Turbinella* to one which carries so little descriptive virtue as *Xancus*.

8. Support on taxonomic grounds received from Horace B. Baker (University of Pennsylvania, U.S.A.) : On 7th September 1956 Dr. Horace B. Baker (*University of Pennsylvania, U.S.A.*) addressed the following letter to the Office of the Commission in support of the present case on taxonomic grounds :—

The Commission should accept Dr. Baily's petition to prefer *Turbinella* Lamarck, June 1799, which anyway may be prior to the actually unpublished *Xancus* [Röding], manuscript date, September 1798.

9. Support on taxonomic grounds received from E. P. Chace (Natural History Museum, Balboa Park, San Diego, California, U.S.A.) : On 22nd September 1956 Dr. E. P. Chace (*Natural History Museum, Balboa Park, San Diego, California, U.S.A.*) addressed the following letter to the Office of the Commission in support of the present case on taxonomic grounds :—

Dr. Baily's proposal regarding the generic name *Turbinella* seems to me to be very wise.

In view of the fact that the *Museum Boltenianum* is at best a very unsatisfactory work for determining or applying Molluscan names

it would hardly seem advisable to attempt to impose it upon writers working in other fields.

Since *Museum Boltenianum* is accepted only with grave reservations by Conchologists as a group it would seem to make for better feeling and greater clarity for us to accept and return to the Lamarckian name *Turbinella* so widely used in literary, legal, and commercial writings and discard the comparatively little known *Xancus* and XANCIDAE.

I therefore urge the Commission to use its Plenary Powers to suppress the generic name *Xancus* for the purpose of the Law of Priority but not for those of the Law of Homonymy, and I endorse the proposals (2)-(3)-(4)-(5) and (6) on page 332 of the *Bulletin of Zoological Nomenclature*.

10. Objection on taxonomic grounds received from three specialists at the Senckenbergische Naturforschende Gesellschaft, Frankfurt a. Main, Germany : On 17th May 1956 Dr. A. Zilch, Professor R. Mertens and Dr. O. Kraus (all of the *Senckenbergische Naturforschende Gesellschaft, Frankfurt a. Main, Germany*) addressed the following letter to the Office of the Commission in which they expressed their objection to the present case on taxonomic grounds (Zilch *et al.*, 1956, *Bull. zool. Nomencl.* **12** : 183) :—

Zu dem Antrag von J. L. Baily (Z.N.(S.) 383) " Proposed use of the Plenary Powers to preserve the generic name *Turbinella* Lamarck, 1799, as the name for the Sacred Chank Shell of India " möchte ich Ihnen folgende Stellungnahme übermitteln :

Der Name *Turbinella* Lamarck, 1799, ist jüngerer, objektives Synonym von *Xancus* [Röding], 1798. *Turbinella* ist mehr als hundert Jahre in Gebrauch gewesen. Im Jahre 1926 (*Opinion* 96) erklärte die Kommission die Namen Röding's (1798) in *Museum Boltenianum* für nomenklatorisch verfügbar. Hierdurch musste der alte Name *Turbinella* Lamarck durch *Xancus* [Röding] ersetzt werden.

Xancus ist inzwischen in Gebrauch gekommen und auch in die führenden Handbücher (1931 Thiele : 342 ; 1943 Wenz : 1301) eingegangen. Wir halten es deshalb für verfehlt, den Namen *Xancus* [Röding], 1798, jetzt noch, nach 30-jähriger Gültigkeit, zu unterdrücken und damit ausserdem die in *Opinion* 96 getroffene Entscheidung der Kommission zu durchbrechen.

11. Objection on taxonomic grounds received from R. Tucker Abbott (The Academy of Natural Sciences of Philadelphia, Philadelphia, Pennsylvania, U.S.A.): On 7th September 1956 Professor R. Tucker Abbott (*The Academy of Natural Sciences of Philadelphia, Philadelphia, Pennsylvania, U.S.A.*) addressed the following letter to the Office of the Commission in which he expressed his objection to the present case on taxonomic grounds :—

I am submitting for consideration my objections over the application for the proposed use of the Plenary Powers to preserve the generic name *Turbinella* Lamarck as the name for the Sacred Chank Shell by J. L. Baily, Jr.

Although the name *Turbinella* was used almost exclusively for the Indian Chank up until 1916, since then the name *Xancus* has gradually come into use, until, today, there are few, if any, popular or scientific books and articles which do not use Röding's name of *Xancus*.

Most of the Indian literature on the fisheries and ethnology of the Chank was written by James Hornell. Although he and his students once used *Turbinella*, they have for the last ten years been using *Xancus*. Below are several papers which use *Xancus* :

James Hornell, 1951. "Indian Molluscs", *Bombay Natural History Society*

Devanesen, D. W. and Chacko, P. I., 1944. "On the bionomics of the sacred chank, *Xancus pyrum* (Linn.). *Proc. nat. Inst. Sci. India*, Vol. 10

Venkataraman, R. and Chari, S. T., 1953. "Food value of the edible portion of the Indian Chank, *Xancus pyrum*". *Current Science (India)*, Vol. 22

A search of the fisheries administrative and research reports by the Indian Government at Madras for the last fifteen years failed to bring to light a single reference to the name *Turbinella*, although many hundreds of pages are devoted to the Chank Shell. Of twelve popular identification books on mollusks published in the last fifteen years, eleven use *Xancus*, one used *Turbinella*. The scientific literature is almost unanimous in its use of *Xancus*, the most frequently consulted works among these being Thiel's *Handbuch der Systematischen Weichtierkunde* (1931), Wenz's *Handbuch der Paläozoologie* (Pt. 6, p. 1302.1943), Abbot's "The Genera *Xancus* and *Vasum* in the Western

Atlantic" (*Johnsonia*, vol. 2, No. 28). A perusal of the *Zoological Record* shows that the vast majority of workers in the last fifteen years have been using *Xancus*.

In view of the fact that *Xancus* is used today by all workers, except a very few who do not accept Röding's *Museum Boltenianum*, and because *Turbinella* during its first 100 years of use contained a mixture of several genera and families, I strongly urge the Commission to allow the Law of Priority to hold in this case.

12. Objection on taxonomic grounds received from Myra Keen (Stanford University, California, U.S.A.): On 17th September 1956 Dr. Myra Keen (*Stanford University, California, U.S.A.*) addressed the following letter to the Office of the Commission in which she expressed her objection to the present case on taxonomic grounds:—

I wish to protest the proposal by Dr. Joshua L. Baily that the name *Turbinella* Lamarck be conserved at the expense of the prior *Xancus* [Röding]. It seems to me that none of the arguments adduced are of sufficient weight to justify such action at this late date, and there is, moreover the purely practical consideration that as the name *Xancus* has almost without exception been adopted in scientific literature and by museums since 1927, much confusion and label-changing would result. The genus is not one confined to Indian waters; it ranges westward to the Caribbean and in time back to medial or early Tertiary. Reinstating the name *Turbinella* would not expunge the word *Xancus* from all the works in which it currently appears, and students of the future would be just as much obliged to learn the synonymous pair of names as they have been. Hence, there would be no real gain, and there would be a loss of principle. I feel that granting of this petition by the Commission would only add to the growing feeling among many systematists that the supposedly firm ground of priority is being made into a quagmire and that the number of exceptions to the *Règles* waxes too great to be worth trying to remember.

13. Objection on taxonomic grounds received from Harald A. Rehder and Joseph P. E. Morrison (Smithsonian Institution, U.S. National Museum, Washington, D.C., U.S.A.): On 1st November 1956 there was received in the Office of the Commission a letter from Dr. Harald A. Rehder and Dr. Joseph P. E. Morrison (*Smithsonian Institution, U.S. National Museum, Washington,*

D.C., U.S.A.) in which they expressed their objection to the present case on taxonomic grounds :—

We wish unreservedly to support the position taken by Dr. R. Tucker Abbot in his letter to you of September 7,¹ objecting to the proposal of Joshua L. Baily, Jr. to preserve the generic name *Turbinella* Lamarck, 1799.

As Dr. Abbot has already pointed out the recent papers dealing with the Chank Fisheries, emanating from India have used the prior name *Xancus*, as for the recent comprehensive malacological reference works. To replace *Xancus* with *Turbinella* would cause just such confusion as Dr. Baily states that he wishes to avoid. We hope that the Commission will reject this proposal and allow the law of priority to stand in this case.

14. Support on anthropological grounds received from the Royal Anthropological Institute of Great Britain and Ireland, London : On 15th June 1956 Miss Marian W. Smith (Joint Hon. Sec., *Royal Anthropological Institute of Great Britain and Ireland, London*) addressed the following letter to the Office of the Commission expressing the Institute's support to the present case (Smith, 1956, *Bull. zool. Nomencl.* **12** : 183) :—

The Royal Anthropological Institute has referred the question of the name *Turbinella* as the name for the Sacred Chank Shell of India to five of its leading Fellows, and the matter was also raised at its last Council meeting on 7th June.

The concensus of opinion seems to be that considerable confusion might result from any strict application of a rule establishing the name *Xancus*. An application to validate the name *Turbinella* Lamarck is suggested. Not only has the name been widely used for a century, but it is the one under which the species is known in practically all literature.

The name is used by professional conchologists, by anthropologists and prehistorians, and a change would inevitably lead to the assumption that a different species was under discussion. A rather awkward

¹ For the letter by Professor R. Tucker Abbot here referred to, see paragraph 11 above.

alternative would be to recommend the continued use of *Turbinella*, placed in brackets after *Xancus*.

15. Objection received after the close of the Prescribed Waiting Period and after the issue of the Voting Paper in the present case :

On 20th December 1956, i.e. after the Close of the Prescribed Waiting Period and after also the issue of the Voting Paper in the present case (paragraph 16 below) a communication was received in the Office of the Commission from Mr. Arthur N. Dusenbury, Jr. (*Creole Petroleum Corporation, Jusepín, Monagas, Venezuela*). Mr. Dusenbury was informed by the Secretary that his communication had been received too late to receive consideration but that it would be reproduced for purposes of record in the *Opinion* which would be rendered when a decision had been taken by the Commission on the Voting Paper then before it. Mr. Dusenbury's letter (which was dated 6th December 1956) contained a request for the rejection of the application submitted by Dr. Joshua L. Baily, Jr. and set out the action of an affirmative character which would be required if the above application were to be rejected. The text of Mr. Dusenbury's letter was as follows :—

Dr. Joshua L. Baily, Jr. (*Bull. zool. Nomencl.* **11** : 330—332) has made a very good case for the "Proposed Use of the Plenary Powers to Preserve the Generic Name *Turbinella* Lamarck, 1799, as the Name for the Sacred Chank Shell of India", but has failed to state the case against it.

2. I would have had no objection to Mr. Baily's proposal if it had been made in 1926, when the International Commission on Zoological Nomenclature in *Opinion* 96 recognized the *Museum Boltenianum* as available for nomenclatorial purposes, thereby validating *Xancus* [Röding], 1798, and reducing *Turbinella* Lamarck, 1799, to the status of a junior objective synonym. In the thirty years which have elapsed since 1926, *Xancus* [Röding] and the family XANCIDAE are names which have become deeply rooted in paleontological and conchological literature, with the result that, in my opinion, more confusion would be caused by reverting to *Turbinella* and TURBINELLIDAE than would be caused by a strict enforcement of the *Règles*. Dr. Baily's proposal would penalize those authors who have followed the *Règles* and favor those who have neglected them.

3. As witness for the prevalence of *Xancus* in the recent paleontological and conchological literature, I can only cite the evidence of my

own somewhat limited library. The earliest modern reference to *Xancus* occurs in 1917. This and subsequent pertinent references are listed below.

- Xancus* Bolten.² Maury, 1917, *Bull. amer. Paleont.* 5 (No. 29) : 247
- Turbinella* Lamarck, *Xancus* Bolten.² Hubbard, 1920, *N. Y. Acad. Sci.*, "Sci. Surv. Porto Rico and Virgin Ids." 3(2) : 153—155
- Xancus* Bolton [sic]. Olsson, 1922, *Bull. amer. Paleont.* 9 (No. 39) : 283—284
- Xancus* Bolten.² Maury, 1925, *Bull. amer. Paleont.* 10 (No. 42) : 359—360
- Xancus peruvianus* n. sp. Olsson, 1928, *Bull. amer. Paleont.* 14 (No. 52) : 89
- XANCIDAE, *Xancus* ("Bolten") Röding. Woodring, 1928, *Carnegie Inst. Wash.* 385 : 250—252
- Xancus* (Bolten) Röding, 1798. Thiele, 1929, *Handb. syst. Weichtierk.* (1) : 342
- Xancus* Bolten.² Weisbord, 1929, *Bull. amer. Paleont.* 14 (No. 54) : 278—279
- Xancus* ("Bolten") Röding *Eoxancus*, n. subg. Olsson, 1930, *Bull. amer. Paleont.* 17 (No. 62) : 47—49
- Xancus* Bolton² [sic]. F. & H. K. Hodson, 1931, *Bull. amer. Paleont.* 16 (No. 59) : 38—41
- Xancus* Bolton.² F. & H. K. Hodson, 1931, *Bull. amer. Paleont.* 16 (No. 60) : 106—107
- Xancus wilsoni* Conrad. Tucker & Wilson, 1933, *Bull. amer. Paleont.* 18 (No. 66) : 72—73
- XANCIDAE, *Xancus*. Davies, 1935, *Tertiary Faunas*, 1 : 295, 297
- XANCIDAE. Aldrich & Snyder, 1936, *Florida Sea Shells* : 67
- XANCIDAE, *Xancus* Röding, 1797 [sic]. Maxwell Smith, 1940, *World-Wide Sea Shells* : 64
- Turbinella scolymus* Gmelin. Webb, 1942, *United States Mollusca* : 7
- Xancus* "Bolten" Röding, 1798. Shimer & Shrock, 1944, *Index Fossils of North America* : 508
- XANCIDAE, *Xancus* (Bolten) Röding. Gardner, 1945, *Mem. geol. Soc. Amer.* 11 : 210—211
- XANCIDAE, *Xancus* Röding, 1798. Maxwell Smith, 1945, *East Coast Marine Shells* (ed. 3) : 127
- XANCIDAE, *Xancus* ("Bolten") Röding, 1798. Clark, 1946, *Mem. geol. Soc. Amer.* 16(1) : 42
- XANCIDAE, *Xancus angulatus*. Morris, 1947, *A Field Guide to the Shells* (ed. 1) : 161—162

² The question of the authorship—whether Bolten or Röding—of the anonymous work *Museum Boltinianum* published in 1798 has been the subject of a Ruling in the Commission's recently published *Direction* 48 (1956, *Ops. Decls. int. Comm. zool. Nomencl.* 1(D) : 255—264) under which names in this work are to be attributed to Röding and not to Bolten.

Turbonella pyrum, *Turbinellum pyrum*. Webb, 1948, *Handbook for Shell Collectors* (ed. 8) : 107, 233

XANCIDAE, *Xancus* Bolten,³ 1798. Morris, 1951, *A Field Guide to the Shells* (ed. 2) : 209—210

Xancus Röding. Rehder, 1951, in Rogers, *Shell Book* (ed. 2) : 489

XANCIDAE. C. N. & N. R. Vilas, 1952, *Florida Marine Shells* (ed. 2) : 85

XANCIDAE, XANCINAE, *Xancus* Röding, 1798. Abbot, 1954, *American Seashells* : 244—245

4. Of the twenty-six references found, twenty-three use *Xancus* or XANCIDAE, one uses *Turbinella*, one uses misspellings of *Turbinella* and one uses both *Xancus* and *Turbinella*, its author apparently unaware that the two names are objective synonyms. This preponderance of the name *Xancus* over the name *Turbinella* might perhaps be reversed in Asia, but it is nevertheless perfectly clear that Dr. Baily's proposal would cause confusion, especially in America. Since there is bound to be some confusion whether the name *Xancus* is retained or whether it is replaced by the name *Turbinella*, it would seem best to adhere strictly to the *Règles*.

5. Dr. Baily's proposal is defective in several minor respects. XANCIDAE Woodring, 1928, *loc. cit.*, has priority over XANCIDAE Johnson, 1934, and it appeared in a very well known treatise on the paleontology of the Miocene Bowden formation of Jamaica. No provision has been made for *Turbinellus* Lamarck, 1801, presumably an invalid emendation of *Turbinella* Lamarck, 1799, nor for *Turbinella* Bory de St. Vincent, 1827, a protozoan (Neave, 1940, *Nomencl. zool.* 4 : 592), and a junior homonym of *Turbinella* Lamarck, nor for the misspellings *Turbonella* Webb, 1948, and *Turbinellum* Webb, 1948, noted in the preceding paragraphs.

6. In view of the foregoing considerations, it seems advisable to submit an alternate set of proposals to the International Commission on Zoological Nomenclature, namely that it should :—

- (1) place the under-mentioned name on the *Official List of Generic Names in Zoology* :

Xancus [Röding], 1798 (gender : masculine) (type species, by subsequent designation of Dall, 1906 : *Voluta pyrum* Linnaeus, 1767) ;

³ See Footnote 2 above.

- (2) place the under-mentioned name on the *Official List of Specific Names in Zoology* :

pyrum Linnaeus, 1767, as published in the combination *Voluta pyrum* (specific name of type species of *Xancus* [Röding], 1798) ;

- (3) place the under-mentioned names on the *Official Index of Rejected and Invalid Generic Names in Zoology* :—

(a) *Turbinella* Lamarck, 1799, an objective synonym of *Xancus* [Röding], 1798 ;

(b) *Turbinellus* Lamarck, 1801, an invalid emendation of *Turbinella* Lamarck, 1799 ;

(c) *Turbinella* Bory de St. Vincent, 1827, a junior homonym of *Turbinella* Lamarck, 1799 ;

(d) *Turbonella* Webb, 1948, and *Turbinellum* Webb, 1948, both erroneous subsequent spellings of *Turbinella* Lamarck, 1799 ;

- (4) place the under-mentioned name on the *Official List of Family-Group Names in Zoology* :—

XANCIDAE Woodring, 1928 (type genus : *Xancus* [Röding], 1798) ;

- (5) place the under-mentioned name on the *Official Index of Rejected and Invalid Family-Group Names in Zoology* :—

TURBINELLIDAE Swainson, 1840 (type genus : *Turbinella* Lamarck, 1799).

III. THE DECISION TAKEN BY THE INTERNATIONAL COMMISSION ON ZOOLOGICAL NOMENCLATURE

16. Issue of Voting Paper V.P.(56)42 : On 30th November 1956 a Voting Paper (V.P.(56)42) was issued in which the Members of the Commission were invited to vote either for, or against, "the proposal relating to the generic name *Turbinella* Lamarck, 1799, as set out in Points (1) to (6) in paragraph 8 on page 332

in Volume 11 of the *Bulletin of Zoological Nomenclature*” [i.e. in the paragraph numbered as above in the paper reproduced in the first paragraph of the present *Opinion*].

17. The Prescribed Voting Period : As the foregoing Voting Paper was issued under the Three-Month Rule, the Prescribed Voting Period closed on 2nd March 1957.

18. Particulars of the Voting on Voting Paper V.P.(56)42 : At the close of the Prescribed Voting Period, the state of the voting on Voting Paper V.P.(56)42 was as follows :—

(a) *Affirmative Votes had been given by the following eighteen (18) Commissioners (arranged in the order in which Votes were received) :*

Boschma ; Hering ; Mayr ; Lemche ; Bonnet ;
Bradley (J.C.) ; Bodenheimer ; Dymond ; Kühnelt ;
Riley ; Esaki ; Stoll ; do Amaral ; Cabrera ; Tor-
tonese ; Hemming ; Jaczewski ; Miller ;

(b) *Negative Votes, six (6) :*

Vokes ; Holthuis ; Prantl ; Mertens ; Key ; Sylvester-
Bradley ;

(c) *Prevented from Voting by interruption of postal communica-
tions consequent upon political disturbances, one (1) :*

Hankó ;

(d) *Voting Papers not returned :*

None.

19. Declaration of Result of Vote : On 3rd March 1957, Mr. Hemming, acting as Returning Officer for the Vote taken on Voting Paper V.P.(56)42, signed a Certificate that the Votes cast were as set out in paragraph 18 above and declaring that, this being a case involving the possible use of the Plenary Powers, the proposals regarding which had received not less than two out of every three votes cast, the proposals submitted had been duly adopted and that the decision so taken was the decision of the International Commission in the matter aforesaid.

20. Addition of four generic names to the " Official Index of Rejected and Invalid Generic Names in Zoology : On 2nd July 1957 the Secretary executed the following Minute drawing attention to certain invalid generic names involved in the present case and directing that under the " Completeness-of-Opinions " Rule the said names be placed on the *Official Index of Rejected and Invalid Generic Names in Zoology* in the Ruling to be given in the *Opinion* embodying the decision taken by the International Commission by its vote on Voting Paper V.P.(56)42 :—

Insertion of four additional invalid names on the " Official Index of Generic Names in Zoology " under the " Completeness-of-Opinions " Rule

By FRANCIS HEMMING, C.M.G., C.B.E.

(*Secretary to the International Commission on Zoological Nomenclature*)

In a letter dated 6th December 1956 received after the issue of Voting Paper V.P.(56)42 Mr. Arthur N. Dusenbury (*Jusepin, Monagas, Venezuela*) drew attention to the existence of three Invalid Emendations and/or Erroneous Subsequent Spellings for *Turbinella* Lamarck, 1799, and one junior homonym of that name. The names (or spellings) concerned, with their respective references are as follows :—

Turbinellus Lamarck, 1801, *Syst. Anim. sans Vertèbr.* : 83

Turbinella Bory de St. Vincent, [1827], *Ency. méth.*, Zooph. : 525

Turbinellum Webb, 1948, *Handbook Shell Collectors* (ed. 8) : 233

Turbonella Webb, 1948, *Handbook Shell Collectors* (ed. 8) : 107

2. Of the above names the first is an Invalid Emendation by Lamarck of his own name *Turbinella*, while the third and fourth are Erroneous Subsequent Spellings for that name. The second of the names cited above is a junior homonym of *Turbinella* Lamarck.

3. As Secretary, I now hereby direct that under the "Completeness-of-Opinions" Rule the names specified in paragraph 1 of the present Minute, together with the particulars specified in paragraph 2, be inscribed on the *Official Index of Rejected and Invalid Specific Names in Zoology* in the Ruling to be given in the *Opinion* embodying the decision in the present case taken by the International Commission by its vote on Voting Paper V.P.(56)42.

21. Insertion on the "Official Index of Rejected and Invalid Family-Group Names in Zoology" of an earlier bibliographical reference for the family-group name based on the generic name "Xancus" [Röding], 1798, than that previously believed to be the oldest such reference : On 2nd July 1957 the Secretary executed the following Minute drawing attention to the existence of an earlier bibliographical reference for the family-group name based on the generic name *Xancus* [Röding], 1798, than that previously believed to be the oldest such reference and directing that the entry relating to the above family-group name to be made on the *Official Index of Rejected and Invalid Family-Group Names in Zoology* be corrected accordingly :—

Insertion on the "Official Index of Rejected and Invalid Family-Group Names in Zoology" of an older bibliographical reference for the nominal family-group taxon based upon the generic name "Xancus" [Röding], 1798, than the oldest such previously ascertained

By FRANCIS HEMMING, C.M.G., C.B.E.

(Secretary to the International Commission on Zoological Nomenclature)

At the time of the submission to the International Commission on Zoological Nomenclature of Application Z.N.(S.) 383 relating to the generic name *Turbinella* Lamarck, 1799, and associated names it was believed that the generic name *Xancus* [Röding], 1798, had first been

taken as the base for a family-group name XANCIDAE by Johnson in 1934 and it was accordingly recommended in that application that the foregoing name should be placed on the *Official Index of Rejected and Invalid Family-Group Names in Zoology* as from the above author and date.

2. In a communication received from Mr. Arthur N. Dusenbury (*Jusepín, Monagas, Venezuela*) after the issue of Voting Paper V.P.(56)42 relating to the above case attention was drawn to an earlier reference for the family-group name discussed above, namely XANCIDAE Woodring, 1928 (*Carnegie Inst. Wash.* 385 : 250—252).

3. As Secretary, I now hereby direct that, when in accordance with the vote taken by the International Commission on the Voting Paper specified above the name XANCIDAE is inscribed on the *Official Index of Rejected and Invalid Family-Group Names in Zoology*, it be attributed not to Johnson, 1934, but to Woodring, 1928.

22. Preparation of the Ruling given in the present " Opinion " : On 3rd July 1957 Mr. Hemming prepared the Ruling given in the present *Opinion* and at the same time signed a Certificate that the terms of that Ruling were in complete accord with those of the proposal approved by the International Commission in its Vote on Voting Paper V.P.(56)42, subject (a) to the addition to the *Official Index of Rejected and Invalid Generic Names in Zoology* under the " Completeness-of-Opinions " Rule of the four generic names specified in the Minute executed by the Secretary on 2nd July 1957, the text of which has been reproduced in paragraph 20 of the present *Opinion*, and (b) to the substitution of an earlier bibliographical reference for the family-group name based on the generic name *Xancus* [Röding], 1798, in place of that previously believed to be the oldest such reference, as directed in the Minute executed by the Secretary on the date specified above, the text of which has been reproduced in paragraph 21 of the present *Opinion*.

23. Original References : The following are the original references for the generic and specific names placed on *Official*

Lists and Official Indexes by the Ruling given in the present *Opinion* :—

- pyrum*, *Voluta*, Linnaeus, 1767, *Syst. Nat.* (ed. 12) 1(2) : 1195
- Turbinella* Lamarck, 1799, *Mém. Soc. Hist. nat. Paris* 1799 : 73
- Turbinella* Bory de St. Vincent, [1827], *Ency. méth.*, Zooph. : 525
- Turbinellum* Webb, 1948, *Handbook Shell Collectors* (ed. 8) : 233
- Turbinellus* Lamarck, 1801, *Syst. Anim. sans Vertèbr.* : 83
- Turbonella* Webb, 1948, *Handbook Shell Collectors* (ed. 8) : 107
- Xancus* [Röding], 1798, *Mus. bolten.* 2 : 134

24. The following are the original references for the family-group names placed respectively on the *Official List* and *Official Index* of names of taxa of the family-group category by the Ruling given in the present *Opinion* :—

TURBINELLIDAE Swainson, 1840, *Treatise Malac.* (Lardner's *Cab. Cyclop.*) : 75

XANCIDAE Woodring, 1928, *Carnegie Inst. Wash.* 385 : 250—252

25. The prescribed procedures were duly complied with by the International Commission on Zoological Nomenclature in dealing with the present case, and the present *Opinion* is accordingly hereby rendered in the name of the said International Commission by the under-signed Francis Hemming, Secretary to the International Commission on Zoological Nomenclature, in virtue of all and every the powers conferred upon him in that behalf.

26. The present *Opinion* shall be known as *Opinion* Four Hundred and Eighty-Nine (489) of the International Commission on Zoological Nomenclature.

DONE in London, this Third day of July, Nineteen Hundred and Fifty-Seven.

*Secretary to the International Commission
on Zoological Nomenclature*

FRANCIS HEMMING